REMARKS

In the Official Action mailed 02 May 2008, the Examiner reviewed claims 1-15 and 31-35. The Examiner has rejected claims 1-15 and 31-35 under 35 U.S.C. §103(a).

Claims 1-15 and 31-35 remain pending.

Rejection of Claims 1 and 2 under 35 U.S.C. §103(a)

Claims 1 and 2 are rejected under 35 U.S.C. §103(a) as being unpatentable over Roderick et al. (US 4,233,085) in view of Brown et al. (5,885,367).

Rejection of Claims 3-7 under 35 U.S.C. §103(a)

Claims 3-7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Roderick et al. (US 4,233,085) and Brown et al. (5,885,367) as applied to claim 1 above, and further in view of Berman et al. (US 4,663,085).

Rejection of Claim 8 under 35 U.S.C. §103(a)

Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Roderick et al. (US 4,233,085) and Brown et al. (5,885,367) as applied to claim 1 above, and further in view of Marks (US 5,520,747).

Rejection of Claims 9 and 12 under 35 U.S.C. §103(a)

Claims 9 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Roderick et al. (US 4,233,085), Brown et al. (5,885,367), and Marks (US 5,520,747) as applied to claim 8 above, and further in view of Catella et al. (US 4,611,090).

Rejection of Claims 10 and 13 under 35 U.S.C. §103(a)

Claims 10 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Roderick et al. (US 4,233,085), Brown et al. (5,885,367), and Marks (US 5,520,747) as applied to claim 8 above, and further in view of Berman et al. (US 4,663,085).

Rejection of Claim 11 under 35 U.S.C. §103(a)

Claims 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Roderick et al. (US 4,233,085), Brown et al. (5,885,367), and Marks (US 5,520,747) as applied to claim 8 above, and further in view of Nath et al. (US 5,968,287).

Rejection of Claim 14 under 35 U.S.C. §103(a)

Claims 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Roderick et al. (US 4,233,085) and Brown et al. (5,885,367) as applied to claim 1 above, in view of Blieden et al. (US 4,153,813).

The Cited Art

The **Roderick** patent discloses in figures 1 and 4 a solar panel module 10 comprising a frame 14 having side members 61 and cross members 60, 70 arranged to support an array of PV panels 20, identified as solar panels 52, 53, 54 in figure 4. The solar panels are held against frame 14 using holddown strips 16, 18, identified as holddown strips 64, 78 in figure 4. If the solar panels are adhesively affixed to the frame, a holddown strips are not needed. (6/4-14) An electrically insulating film 66-68 is applied directly to the underlying films on the solar panels 52-54 to protect against electrical shock and protect against the elements. Film 66-68 can be applied by, for example, dipping, brushing or by roller. A bituminous layer 0.002- 0.030 inch thick for film 66-68 is disclosed.

The **Brown** patent shows a foldable thin-film solar concentrator for spacecraft including a rectangular solar panel 12 and a pair of flexible, flat rectangular panels 14, one on either side of solar panel 12. Reflector panels 14 extend upwardly away from solar panels 12 so to reflect light onto the solar panel.

The Cited Art Distinguished

Independent claim 1 is not obvious over Roderick in view of Brown for several reasons.

1. Roderick does not disclose a supplemental panel as presently claimed because Roderick teaches that every panel 20 is a PV panel. (2/58-62)
2. Applicant submits that it would not have been obvious to add the reflector panel 14 of Brown to the structure of Roderick because they are directed to completely

different environments, Roderick to Earth-based photovoltaic structures (see 4/3-9) while Brown directed to a spaced-based environment.

3. Even assuming, for sake of discussion, that it would have been obvious to combine the teachings of Brown with Roderick, the combination would not result of the present invention. Such a combination would, applicant submits, result in the structure of Roderick with the addition of the upwardly and outwardly extending reflective panels 14 of Brown. This resulting structure would not be that defined by claim 1, which recites "a planar array of modular panels … comprising PV panels … and supplemental panels … the supplemental panels being other than PV panels ….". There would have been no reason to make the reflective panels 14 of Brown part of a planar array of panels because doing so would eliminate their function to reflect light onto the PV panels.

Therefor, claim 1 is not obvious over Roderick in view of Brown.

Independent claim 31 recites in part "a protective panel ... spaced apart from and covering substantially the entire lower surface of the PV module … ". In contrast, the electrically-insulating film 66-68 of Roderick contacts the entire lower surface of the PV module and is in effect a part of the PV module. In addition, the thinness (0.002- 0.030 inch thick) and the material from which the electrically insulating film 66-68 of Roderick is made (typically a bituminous material) would prevent it from being used in the manner specified in claim 31. The examiner has cited Marks as disclosing spaced apart PV panels. However, as quoted above, that is not what is claimed. Accordingly, claim 31 is allowable over the art.

The **dependent claims** are direct to specific novel subfeatures of the invention and are allowable for that reason as well as by depending from novel parent claims. For example, **claim 2** recites purlins supporting the modular panels, beams located below the purlins and supporting the purlins, and generally vertical columns supporting each beam. Roderick shows no such structure. Solar panel module 10 of Roderick has a frame 14 including side members 61 and cross members 60, 70 supporting an array of solar panels 20. These elements are shown in figures 1 and 4. Solar panels 20 of figure 1 are identified as solar panels 52-54 in figure 4. Solar panels 20 are held against frame 14 using hold down strips 16, 18 in figure 1; the hold down strips of figure 1 are identified as hold down strips 64, 78 in figure 4. As stated at column 6, lines 12 -14, "If panels 14 are adhesively affixed, hold down strips 64 and 78 are not required." Therefore, assuming cross members 60, 70 correspond to the claim to purlins, holddown strips

64, 78 (18, 20 in figure 1) are located above modular panels 52, 53, 54, do not support the panels and therefore are not "beams located beneath said purlins" as claimed. In addition, Roderick lacks "generally vertical columns" because neither cross members 60, 70 nor holddown strips 64, 78 are generally vertical columns as that term would be understood by one of ordinary skill in the art. Also, applicant does not see how either cross members 60, 70 or holddown strips 64, 78 could function as both beams or purlins and also as generally vertical columns. Accordingly, claim 2 is allowable over the cited art. **Claim 8** is allowable for the same basic reasons as independent claim 31.

CONCLUSION

It is respectfully submitted that this application is now in condition for allowance, and such action is requested. If the Examiner believes a telephone conference would aid the prosecution of this case in any way, please call the undersigned at (650) 712-0340.

The Commissioner is hereby authorized to charge any fee determined to be due in connection with this communication, or credit any overpayment, to our Deposit Account No. 50-0869 (PWRL 1029-3).

Respectfully submitted,

Dated: 14 July 2008 /James F. Hann/

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